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The Alaric parton shower algorithm

Wednesday, 10 July 2024 15:00 (20 minutes)

Parton showers are important tools in the event generation chain for future collider. Recently, their formally achieved accuracy has been under extended scrutiny. In this talk I will present a novel take on dipole parton showers [1], resulting in the design of a new parton shower called Alaric that is implemented in the Sherpa framework. I will discuss its resummation properties and show analytic and numerical proofs of its NLL accuracy. I will discuss the latest developments, see [2], and their implications for final state evolution.

[1] JHEP 10 (2023) 091

[2] arXiv:2404.14360

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Primary author: REICHELT, Daniel

Presenter: REICHELT, Daniel

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